

Application Number 10/756,960
Amendment in response to Office Action mailed January 10, 2008

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended) A method comprising:

locking candidate configuration data in response to a command from a client to grant an archive system exclusive access to the candidate configuration data of a network device and lock the candidate configuration data so that no other clients can edit the candidate configuration data, wherein the candidate configuration data represents an editable working copy of current operational configuration data of the network device;

loading, from the archive system, archived configuration data that represents previous operational configuration data of the network device to replace the locked candidate configuration data; and

committing the candidate configuration data to restore the archived configuration data as the operational configuration data of the network device.

Claim 2 (Currently Amended) The method of claim 1, further comprising ~~wherein locking candidate configuration data occurs in response to~~ receiving [[a]] the lock command from the client.

Claim 3 (Currently Amended) The method of claim 2, further comprising maintaining a session with the [[a]] client to receive the lock command.

Claim 4 (Original) The method of claim 3, wherein the lock command comprises a failsafe attribute; and

wherein locking the candidate configuration data in response to receiving the lock command comprises initiating an action in response to failure of the session when the failsafe attribute is enabled.

Application Number 10/756,960
Amendment in response to Office Action mailed January 10, 2008

Claim 5 (Original) The method of claim 4, wherein initiating an action comprises executing a first rollback command to undo changes made in replacing the locked candidate configuration data with the archived configuration data prior to committing the candidate configuration data.

Claim 6 (Original) The method of claim 1, wherein loading archived configuration data occurs in response to receiving a load command.

Claim 7 (Currently Amended) The method of claim 6,
wherein the load command comprises an override attribute; and
wherein loading the archived configuration data in response to receiving the load command includes discarding the entire candidate configuration and replacing the discarded candidate configuration data with the archived configuration data in response to the override attribute of the load command.

Claim 8 (Original) The method of claim 1, wherein committing the candidate configuration data includes confirming the candidate configuration data prior to permanently committing the candidate configuration data.

Claim 9 (Original) The method of claim 8, wherein confirming the candidate configuration data occurs in response to receiving a confirm commit command.

Claim 10 (Original) The method of claim 8, wherein confirming the candidate configuration data comprises:

- temporarily committing the candidate configuration data to temporarily restore the archived configuration data as the operational configuration data;
- subsequently enabling a timer to determine a period; and
- permanently committing the candidate configuration data to restore the archived configuration data as the operational configuration data in response to an occurrence of an event prior to the timer exceeding a pre-set time limit.

Application Number 10/756,960
Amendment in response to Office Action mailed January 10, 2008

Claim 11 (Original) The method of claim 10, wherein the event comprises receiving a commit command.

Claim 12 (Original) The method of claim 1, further comprising unlocking the candidate configuration data.

Claim 13 (Original) The method of claim 12, wherein unlocking the candidate configuration data occurs in response to receiving an unlock command.

Claim 14 (Original) The method of claim 13, wherein locking candidate configuration data permits only a single client to edit the candidate configuration data and unlocking the candidate configuration data allows one or more clients to simultaneously edit the candidate configuration data.

Claim 15 (Original) The method of claim 1, wherein committing the candidate configuration comprises:

- generating a configuration patch that lists any differences between the candidate configuration data and the operational configuration data; and

- applying the configuration patch to the operational configuration data to update the operational configuration data in accordance with the differences.

Claim 16 (Original) The method of claim 15, wherein generating a configuration patch comprises:

- creating a temporary copy of the candidate configuration data;

- merging the operational configuration data into the temporary copy to generate a list of updated configuration objects; and

- generating the configuration patch to list the updated configuration objects.

Application Number 10/756,960
Amendment in response to Office Action mailed January 10, 2008

Claim 17 (Currently Amended) A device comprising:

memory to store current operational configuration data and candidate configuration data, wherein the candidate configuration data represents an editable working copy of the current operational configuration data; and

a control unit to lock the candidate configuration data, load archived configuration data that represents previous operational configuration data of the network device to replace the locked candidate configuration data, and commit the candidate configuration data to restore the archived configuration data as the operational configuration data of the device.

Claim 18 (Currently Amended) The device of claim 17, wherein the control unit receives ~~locks the candidate configuration in response to receiving~~ a lock command from the client.

Claim 19 (Currently Amended) The device of claim 18, wherein the control unit further maintains a session with ~~[[a]]~~ the client to receive the lock command.

Claim 20 (Original) The device of claim 19,
wherein the lock command comprises a failsafe attribute; and
wherein the control unit initiates an action in response to failure of the session after receiving the lock command when the failsafe attribute is enabled.

Claim 21 (Original) The device of claim 20, wherein the control unit initiates the failsafe attribute to execute a first rollback command to undo changes made in replacing the locked candidate configuration data with the archived configuration data prior to committing the candidate configuration data.

Claim 22 (Original) The device of claim 17, wherein the control unit loads the archived configuration data in response to receiving a load command.

Application Number 10/756,960
Amendment in response to Office Action mailed January 10, 2008

Claim 23 (Currently Amended) The device of claim 22,
wherein the load command comprises an override attribute; and
wherein the control unit discards the entire candidate configuration and replace the
discarded candidate configuration data with the archived configuration data when the override
attribute is enabled.

Claim 24 (Currently Amended) The device of claim 17 [[1]], wherein the control unit
commits the candidate configuration data by confirming the candidate configuration data prior to
permanently committing the candidate configuration.

Claim 25 (Original) The device of claim 24, wherein the control unit confirms the candidate
configuration data in response to receiving a confirm commit command.

Claim 26 (Original) The device of claim 24, wherein the control unit to confirm the candidate
configuration data comprises a control unit to:

- temporarily commit the candidate configuration data to temporarily restore the archived
configuration data as the operational configuration data;
- subsequently enable a timer to determine a period of time to an event; and
- permanently commit the candidate configuration data to restore the archived
configuration data as the operational configuration data in response to an occurrence of the event
prior to the timer exceeding a pre-set time limit.

Claim 27 (Original) The device of claim 26, wherein the event comprises receiving a commit
command.

Claim 28 (Original) The device of claim 17, further comprising the control unit to unlock the
candidate configuration data.

Claim 29 (Original) The device of claim 28, wherein the control unit unlocks the candidate
configuration data occurs in response to receiving an unlock command.

Application Number 10/756,960
Amendment in response to Office Action mailed January 10, 2008

Claim 30 (Original) The device of claim 28, wherein locking candidate configuration data permits only a single client to edit the candidate configuration data and unlocking the candidate configuration data allows one or more clients to simultaneously edit the candidate configuration data.

Claim 31 (Original) The device of claim 17, wherein committing the candidate configuration comprises the control unit to generate a configuration patch that lists any differences between the candidate configuration data and the operational configuration data, and apply the configuration patch to the operational configuration data to update the operational configuration data in accordance with the differences.

Claim 32 (Original) The device of claim 31, wherein generating a configuration patch comprises the control unit to create a temporary copy of the candidate configuration data, merge the operational configuration data into the temporary copy to generate a list of updated configuration objects, and generate the configuration patch to list the updated configuration objects.

Claim 33 (Currently Amended) A method comprising:

issuing a lock command from a client to lock candidate configuration data to request exclusive access to the candidate configuration data of a network device and lock the candidate configuration so that no other clients can edit the candidate configuration data, wherein the candidate configuration data represents an editable working copy of current operational configuration data of the network device;

issuing a load command to load archived configuration data that represents previous operational configuration data of the network device to replace the locked candidate configuration data; and

issuing a commit command to commit the candidate configuration data to restore the archived configuration data as the operational configuration data of the network device.

Application Number 10/756,960

Amendment in response to Office Action mailed January 10, 2008

Claim 34 (Original) The method of claim 33, further comprising establishing a session, wherein issuing the lock command, the load command, and the commit command occurs via the session.

Claim 35 (Currently Amended) The method of claim 34, wherein the lock command and load command comprise a failsafe attribute and an override attribute respectively, wherein the failsafe attribute causes a rollback command to undo changes made when the archived configuration data replaced the locked candidate configuration data ~~execute~~ in response to failure of the session prior to issuing the commit command, and the override attribute causes discarding of the candidate configuration data and replacement of the discarded candidate configuration with the archived configuration data.

Claim 36 (Original) The method of claim 33, wherein issuing a commit command comprises:
issuing a confirm commit command to temporarily commit the candidate configuration data to restore the archived configuration data as the operational configuration data;
performing integrity tests to assess a state of one or more devices; and
selectively issuing the commit command based on the assessed state of the one or more devices.

Claim 37 (Original) The method of claim 36, further comprising presenting one or more user interfaces having one or more inputs, wherein issuing the lock command, the load command, the commit confirm command, and the commit command occur in response to receiving states of the inputs.

Claim 38 (Original) The method of claim 37, wherein inputs comprise selectors, action inputs, radio buttons, pull down menus, field inputs, and check boxes.

Claim 39 (Original) The method of claim 33, further comprising accessing a memory to retrieve the archived configuration data.

Application Number 10/756,960
Amendment in response to Office Action mailed January 10, 2008

Claim 40 (Currently Amended) An archive system comprising:

a memory to store archived configuration data that represents previous operational configuration data of a network device; and

a computing device to issue a lock command to lock candidate configuration data, wherein the candidate configuration data represents an editable working copy of current operational configuration data of the network device, issue a load command to load the archived configuration data to replace the locked candidate configuration data, and issue a commit command to commit the candidate configuration data to restore the archived configuration data as the operational configuration data of the network device.

Claim 41 (Original) The archive system of claim 40, wherein the computing device further establishes a session, wherein issuing the lock command, the load command, and the commit command occurs via the session.

Claim 42 (Currently Amended) The archive system of claim 41, wherein the lock command and load command comprise a failsafe attribute and an override attribute respectively, wherein the failsafe attribute causes a rollback command to ~~execute~~ undo changes made when the archived configuration data replaced the locked candidate configuration data in response to failure of the session prior to issuing the commit command, and the override attribute causes discarding of the candidate configuration data and replacement of the discarded candidate configuration with the archived configuration data.

Claim 43 (Currently Amended) The archive system of claim 40, wherein the computing device issues control unit to issue a commit command ~~comprises a control unit to issue~~ a confirm commit command to temporarily commit the candidate configuration data to restore the archived configuration data as the operational configuration data, perform integrity tests to assess a state of one or more devices, and selectively issue the commit command based on the assessed state of the one or more devices.

Application Number 10/756,960

Amendment in response to Office Action mailed January 10, 2008

Claim 44 (Currently Amended) The archive system of claim 43, wherein the computing device control unit further presents one or more user interfaces having one or more inputs, wherein issuing the lock command, the load command, the commit confirm command, and the commit command occur in response to receiving states of the inputs.

Claim 45 (Original) The archive system of claim 44, wherein inputs comprise selectors, action inputs, radio buttons, pull down menus, field inputs, and check boxes.

Claim 46 (Currently Amended) A computer-readable medium comprising instructions to cause a processor to:

lock candidate configuration data in response to a command from a client to grant an archive system exclusive access to the candidate configuration data of a network device and lock the candidate configuration data so that no other clients can edit the candidate configuration data, wherein the candidate configuration data represents an editable working copy of current operational configuration data of the network device;

load, from the archive system, archived configuration data that represents previous operational configuration data of the network device to replace the locked candidate configuration data; and

commit the candidate configuration data to restore the archived configuration data as the operational configuration data of the network device.

Claim 47 (Currently Amended) The computer-readable medium of claim 46, further comprising wherein instructions to cause a processor to lock candidate configuration data include instructions to cause a processor to lock the candidate configuration data in response to receiving receive a lock command, wherein the lock command comprises a failsafe attribute.

Application Number 10/756,960
Amendment in response to Office Action mailed January 10, 2008

Claim 48 (Currently Amended) The computer-readable medium of claim 47, further comprising instructions to cause the processor to:

- maintain a session with ~~[[a]]~~ the client; and
- automatically execute a first rollback command to undo changes made in replacing the locked candidate configuration data with the archived configuration data prior to committing the candidate configuration data in response to failure of the session when the failsafe attribute is enabled.

Claim 49 (Original) The computer-readable medium of claim 46, further comprising instructions to cause the processor to load the archived configuration data in response to receiving a load command, wherein the load command comprises an override attribute.

Claim 50 (Currently Amended) The computer-readable medium of claim 49, further comprising instructions to cause the processor to initiate the override attribute to discard the entire candidate configuration and replace the discarded candidate configuration data with the archived configuration data.

Claim 51 (Original) The computer-readable medium of 46, further comprising instructions to cause the processor to:

- temporarily commit the candidate configuration data to temporarily restore the archived configuration data as the operational configuration data;
- subsequently enable a timer to determine a period of time to an event; and
- permanently commit the candidate configuration data to restore the archived configuration data as the operational configuration data in response to an occurrence of the event prior to the timer exceeding a pre-set time limit.

Claim 52 (Original) The computer-readable medium of claim 46, further comprising instruction to cause the processor to unlock the candidate configuration data.

Application Number 10/756,960

Amendment in response to Office Action mailed January 10, 2008

Claim 53 (Currently Amended) A computer-readable medium comprising instruction to cause a processor to:

issue a lock command to lock candidate configuration data, wherein the candidate configuration data represents a working copy of operational configuration data of a network device;

issue a load command to load archived configuration data that represents previous operational configuration data of the network device to replace the locked candidate configuration data; and

issue a commit command to commit the candidate configuration data to restore the archived configuration data as the operational configuration data of the network device.

Claim 54 (Currently Amended) The computer-readable medium of claim 53, wherein the lock command and load command comprise a failsafe attribute and an override attribute respectively, wherein the failsafe attribute causes a rollback command to undo changes made when the archived configuration data replaced the locked candidate configuration data execute in response to failure of [[the]] a session prior to issuing the commit command, and the override attribute causes discarding of the candidate configuration data and replacement of the discarded candidate configuration with the archived configuration data.

Claim 55 (Original) The computer-readable medium of claim 53, further comprising instructions to cause the processor to:

issue a confirm commit command to temporarily commit the candidate configuration data to restore the archived configuration data as the operational configuration data;

perform integrity tests to assess a state of one or more devices; and

selectively issue the commit command based on the assessed state of the one or more devices.